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BEFORE THE POSTAL REGULATORY COMMISSION WASHINGTON, D.C. 20268-0001

MAIL PROCESSING NETWORK RATIONALIZATION SERVICE CHANGES, 2011

Docket No. N2012-1

RESPONSES OF UNITED STATES POSTAL SERVICE WITNESS EMILY ROSENBERG TO PUBLIC REPRESENTATIVE INTERROGATORIES PR/USPS-T3-1 THROUGH 16

The United States Postal Service hereby files the responses of witness

Emily Rosenberg to the above-listed interrogatories of the Public Representative dated

December 21, 2011. Each interrogatory is stated verbatim and followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

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PR/USPS-T3-1

Please refer to USPS-LR-14, 14_Mail Processing Window Scoring Tool.xls, Worksheet: "Assumptions."

- a. Please confirm that the current total number AFCS machines in use is 1,026. If not confirmed, please explain.
- b. Please list the maximum throughput per hour of each machine in Cells C48:C76, assuming the machine is idle 3 minutes (5 percent) each hour.
- c. What is the current utilization rate of each of the machines listed in "b", by tour?
- d. What do you expect the utilization rate of each of the machines listed in "a", by tour, if the Postal Service's proposal is implemented?

RESPONSE

- a. Not confirmed. This number represents the total AFCS equipment in the Electronic Maintenance Activity Reporting and Scheduling. This includes machines that are both in use and not in use.
- b. Below is a table of actual 99 percentile throughput by tour of equipment within the scope of the modeling based on actual run-time data of any run that is greater than 10 minutes with the 3 minutes of idle time per hour.

Maximum Throughput By Tour and Equipment Type with 3 Minutes Idle Time per Hour*

	Tour		
Equipment	1	2	3
AFCS (Excludes AFCS200)	30,883	31,622	33,502
CIOSS	38,029	32,118	36,342
CSBCS	38,115	38,422	39,696
DBCS	37,668	38,044	38,369
DIOSS	37,762	37,894	37,889
AFSM100	17,375	17,910	17,260
UFSM1000	7,409	8,478	7,815
APPS (Dual Induction)	9,658	8,443	9,398
SPBS	4,601	3,949	4,582

^{*}Source: FY2010 End of Run

Throughput = round(Σ (Total Pieces Fed)/(Total Run Time in Seconds)*1.05)*3600,0) where 3600 convert seconds into hours

RESPONSE to PR/USPS-T3-1 (continued)

time and start time of each machine and dividing the sum by the product of the total number of machines and 8 hours.

Utilization By Tour and Equipment Type Tour Equipment 1 3 AFCS (Excludes AFCS200) 2% 5% 44% CIOSS 46% 41% 17% **CSBCS** 25% 16% 0% **DBCS** 53% 4% 24% DIOSS 52% 4% 43% AFSM100 18% 62% 63% UFSM1000 82% 18% 0% **APPS** 50% 82% 56% **SPBS** 38% 26% 52%

Source: EOR FY2010

d. The proposed utilization rate by tour is as follows:

Expected Utilization By Tour and Equipment Type Tour Equipment 1 2 3 AFCS (Excludes AFCS200) 0% 0% 79% CIOSS/ 77% 29% 68% **CSBCS** Equipment will not be used under Network Rationalization **DBCS** 44% 88% 44% **DIOSS** 53% 44% 63% AFSM100 18% 63% UFSM1000 Equipment will not be used under Network Rationalization **APPS** Utilization not impacted by Network Rationalization **SPBS** Utilization not impacted by Network Rationalization

This analysis does not assume any operation time efficiencies. It uses the same operational time as in the response to question c and spreads that operational time over the reduced equipment set and reassigns the processing to the respective tour based on

RESPONSE to PR/USPS-T3-1 (continued)

the Network Rationalization concept. This represents the lower bound of machine utilization.

PR/USPS-T3-2

Please refer to USPS-LR-17, 17_ZipAssignment_LocalInsight.xls, Worksheet: "Summary," Cell BA2.

- a. Please confirm that cell BA6 indicates there are two AFCS machines for the facility identified as Finance Number 480015.
- b. If confirmed, please also show, linking all necessary worksheet names and cells, how the number of two AFCS machines is derived.

- a. Confirmed; the value of cell BA6 is 2. According to eMARS at the time of the data extraction, there were 2 AFCS located in the facility defined by Finance Number 480015.
- b. There are no calculations and hence no derivation of this number. It represents the actual equipment count at each facility based on the point in time in which data were extracted from the eMaintenance Activity Reporting and Scheduling (eMARS).

PR/USPS-T3-3

Please refer to USPS-LR-17, 17_ZipAssignment_LocalInsight.xls, Worksheet: "Summary," Cells BA2:BH4.

- a. Please confirm that the number of each of these machines listed above is mapped to the assumed number of machines in USPS-LR-14, 14_Mail Processing Window Scoring Tool.xls, Worksheet: "Assumptions," Cells D47:D76.
- b. Please show, linking all necessary worksheet names and cells, how each of these values was calculated.

- a. Not confirmed; These numbers do not match for two reasons: (1) The data were refreshed between establishing operating windows and utilizing the LogicNet Model. The objective of the scoring tool was to establish a starting point for discussion on the operating windows. Once an operating plan was established, the original scoring tool model was not rerun. (2) The data were not populated for all sites in BA through BH on the Summary Tab of Library Reference 17. Those specific data were not required in that stage of the analysis.
- b. There are no calculations and hence no derivation of this number. This number represents the actual equipment count at each facility based on the point in time in which data were extracted from the eMaintenance Activity Reporting and Scheduling (eMARS).

PR/USPS-T3-4

Please refer to both USPS-LR-14, 14_Mail Processing Window Scoring Tool.xls, Worksheet: "Assumptions," and USPS-LR-17, 17_ZipAssignment_LocalInsight.xls, Worksheet: Model MODS, Cells AM29:AM944. Please provide a list of the number of each of type of machine in cells C47:C76 of 14_Mail Processing Window Scoring Tool.xls, Worksheet: "Assumptions," by the 3-digit ZIP Codes generated in USPS-LR-17, 17_ZipAssignment_LocalInsight.xls, Worksheet: Model MODS, Cells AM29:AM944.

RESPONSE

3-digit ZIP Codes are not processed separately by machines. For our analysis, we break out workload to the 3-digit level, but roll it up to the processing plant level in order to calculate equipment. If equipment is calculated at a 3-digit level, the equipment sets would have been over inflated when machines are rounded to whole numbers.

PR/USPS-T3-5

Please refer to both USPS-LR-14, 14_Mail Processing Window Scoring Tool.xls, Worksheet: "Assumptions," and USPS-LR-17, 17_ZipAssignment_LocalInsight.xls, Worksheet: Model MODS, Cells AM29:AM944. Please provide a list of the number of each of type of machine in cells C47:C76 of 14_Mail Processing Window Scoring Tool.xls, Worksheet: "Assumptions," by the 3-digit ZIP Codes generated in USPS-LR-17, 17_ZipAssignment_LocalInsight.xls, Worksheet: Model MODS, Cells AM29:AM944.

RESPONSE

Same question as PR/USPS-T-3-4. See response to PR/USPS-T-3-4.

PR/USPS-T3-6

Please refer to page 14, footnote 15 of your testimony, where you state that "additional consolidation has occurred as part of the June 2008 Network Plan..."

- a. How would the outputs derived from the Mail Processing Scoring Tool based on the June 2008 network plan compare with those that were used as inputs into Network Optimization performed in USPS-LR-15, Logical Networks?
- b. How many nodes would the Network Optimization tool generate based on the June 2008 network plan?

- a. Footnote 15 is in reference to the LogicNet Model, not the Microsoft Excel Scoring tool. The scoring tool is not designed to utilize geographic specific nodes, but provided the basis for discussion regarding operating windows. As for the LogicNet model, at the time of the model was run, the Postal Service utilized a set list of facilities to choose from, as described in my testimony. Had the Postal Service excluded facilities that were subsequently shut down as part of the AMP process as detailed in the June 2008 Network Plan, the model would not have been allowed to select those facilities as remaining nodes.
- b. The Network Optimization tool was run under the proposed operating concept based on the modification to service standards detailed in USPS-T-1. Had the model been run under the June 2008 network plan framework, in which service standards were not modified, and hence, the operating windows could not be extended to allow for significant consolidation, the number of selected nodes would have been much greater. The Postal Service has not run the model using today's constrained operating windows and maintaining current overnight service standards.

PR/USPS-T3-7

Please refer to page 17 of your testimony, where you state, and "The Logic Net optimization model activated 177 processing facilities...Sixty one buildings activated by the model were later deactivated; 71 sites were activated based on site specific capacity analysis and discussion with the Area." Please confirm that, based on this statement, 71 of the 187 sites used, or 38 percent, were not considered optimal by the model? If not confirmed, please explain.

RESPONSE

This is confirmed with qualifications. All models are based on assumptions. The assumptions and inputs are chosen to reasonably reflect reality. Due to the complexity of the network, simplifying assumptions are required for the model to be computationally feasible and run to completion in a finite amount of time. A model cannot take into account every facet of the complex system that is the nation's postal infrastructure. Thus, based on the parameter and assumptions underlying the model, those facilities were not deemed optimal by the model. It is a necessary step to receive operational insight and feedback based on local knowledge. These insights must be taken into account when reviewing model results. As explained at pages 19-20 of USPS-T-3, local insight was utilized to make the model results conform to operational reality. In addition, some constraints were relaxed such as the distance constraint based on operational knowledge of areas of the country, which changed how site selections could be performed.

PR/USPS-T3-8

Please refer to page 23 of your testimony where you state "[f]or a site to earn its first AFSM100... it must be at least 25 percent utilized." Please provide the basis for the 25 percent utilization threshold, including any supporting data or workpapers.

RESPONSE

Assuming you are referring to page 28, line 11, the Postal Service developed this assumption based on its operational judgment. At the time of tactical implementation, the proposed equipment will be replaced with equipment that better suits the site's needs. The final equipment sets will be determined through the formal USPS Handbook PO-408 process. If at the completion of the study, the workload is not enough volume to justify the equipment, the volume can be sorted manually. The initial equipment analysis was performed as a starting point to ensure appropriate space was allocated for the flat operation required at a given location.

PR/USPS-T3-9

Please reconcile or explain Figure 3 on page 35 of your testimony with the information presented on operating windows shown in USPS- LR-13 Wkld Volume by OP.xls, Sheet: "Time." Both appear to show the operating windows for letters and flats.

- a. For example, the Library Reference appears to show that the Outgoing Primary window for Letters sorted on the DBCS is 9 hours (from 0:00 to 9:08) on day 0, 12 hours (from 21:09 to 33:08) on day 1, and 12 hours (from 45:9 to 57:08) on day 2. However, Figure 3 appears to limit the Outgoing Primary window from 17:30 to 12:30, 4 hours.
- b. Please reconcile any similar discrepancies between the time windows shown in Figure 3 and USPS- LR-13 Wkld Volume by OP.xls, Sheet: "Time."

- a. Figure 3 on page 35 of USPS-T-3 reflects the proposed operating windows for Network Rationalization. The Outgoing Primary window from 5:30 PM to 12:30 AM reflects 7 hours of run time. The operating windows provided within USPS-T-3 are the result of decisions of the Postal Service regarding the appropriate proposed operating windows to support the service standard changes proposed within this docket. The operating windows in USPS Library Reference N2012-1/13 Wkld Volume by OP.xls were all precursors to the final proposed operating windows. Specifically, the outgoing windows were shortened to mitigate the impact on 2-day pairs. In addition, the shortened operating window ensures the processing is completed in time such that the 3-day air volume can be to be transported to the air carriers to meet service standards. In general, mail is assigned to carriers between 11:00 PM and 2:30 AM.
- b. The time tab illustrates the methodology used to determine when operating windows for certain process steps and shape overlap to ensure there is enough equipment to process

RESPONSE to PR/USPS-T3-9 (continued)

the volume with competing windows (i.e., additional equipment sets are required when process steps overlap). Again, this workbook is a precursor to the operating windows used to calculate the detailed equipment sets. At each stage, assumptions were refined.

PR/USPS-T3-10

Please define the term "geography factor" term used in USPS-LR-14, Scoring Tool, 14_Mail Processing Window Scoring Tool.xls, Sheet "Assumptions," Cell E24.

RESPONSE

The Microsoft Excel Scoring Tool was used as a high-level strategic model to assess operating windows. The model assumes all volume is spread equally across the United States. The geography factor was used to scale the results to more accurately reflect the variation in workload across the country.

PR/USPS-T3-11

Please refer to page 6 of your testimony where you state: "Then the model 'scores' each scenario based upon hypothetical transportation, labor, overhead, and administrative costs. These hypothetical costs are used for scoring purposes only, to compare the different scenarios and should not be misinterpreted as cost savings estimates associated with any particular network scenario." Please confirm that the choice of different hypothetical costs would not change the results of the comparison between different scenarios? If not confirmed, please explain.

RESPONSE

The model used actual Postal Service Financial Reporting data. It is stressed that these cannot be used as actual cost savings metrics due to the simplifying assumptions used in this model. The savings the model generates exaggerates the savings opportunity. If different cost metrics are used, the results would change. It is important to remember that the key output of the scoring tool was proposed operating windows. These operating windows were modified based on mail processing management expertise and adjusted to align to additional operational realities, such as required air transportation.

PR/USPS-T3-12

Please refer to page 6, footnote 4 of your testimony where it states, "Together, the 48 contiguous states and the District of Columbia have an area of 3,119,884.69 square miles. Of this, 2,959,064.44 square miles are land, comprising 83.65 percent of U.S. land area. Officially, 160,820.25 square miles are water, comprising 62.66 percent of the nation's water area."

- a. Please provide a primary source for these figures.
- b. Please discuss whether you considered distributing the workload over an alternate measure of area, such as inhabited land mass, rather than total land mass. Please explain why you rejected other methods of distributing the workload over area.

- a. U.S. Census Bureau United States -- States; and Puerto Rico GCT-PH1. Population,
 Housing Units, Area, and Density: 2000 Data Set: Census 2000 Summary File 1 (SF 1)
 100-Percent Data.
- b. In this initial analysis to determine operating windows, the population density and mailing patterns were not required. The Postal Service rejected other methods of distributing the workload over the area in this initial analysis because this specific analysis was focused on operating windows that needed to be set to service all parts of the geography of the United States, including individuals in remote areas. Thus, for defining operating windows distributing volume by mailing patterns was not required at this initial stage of modeling. Mail volume distributions and workload requirements were subsequently utilized within the LogicNet Plus modeling.

PR/USPS-T3-13

Please refer to page 7, footnote 6 of your testimony where you state: "The Fiscal Year 2010 Transportation Contract Support System (TCSS) recorded 19,636 Post Office collection to cancellation processing site trips and 18,022 destination processing plant to delivery unit trips, while the Enterprise Data Warehouse reported a total of 27,559 Post Offices." Please also refer to Library Reference USPS-LR-N2012-1/35, which you reference.

- a. Please confirm that the table 'TCSS' in MS Access file '35_TCSS' represents data from the TCSS database. If confirmed, please provide the description of all Fields (n dn, n conid, n seg, etc) that exist in the Table 'TCSS'.
- b. Please define the name of the table 'All Dry Lanes' and provide a description of all Fields that exist in this table. Please also provide the source of the data presented in the table 'All Dry Lanes'.
- c. Please confirm that USPS-LR-N2012-1/35 provides records from the Enterprise Data Warehouse? If confirmed, please indicate the names of the tables where the records are provided. If not confirmed, please explain.
- d. In the SQL query 'qryCollaborative", which matches two tables ('All Dry Lanes' and 'TCSS'), you perform a joint operation using the Zip Code Field (or Postal Code Field) in 'All Dry Lanes' table and the Nass Code Field in the TCSS table. Please explain why the tables are matched using these fields. Do the fields ('Zip Code' and 'Nass Code' have the same meaning?
- e. Please describe and explain the result of the query 'qryCollaborative' that merges tables 'All Dry Lanes' and 'TCSS', and explain how the data from the query table 'qryCollaborative' are used in the modeling or analysis.

RESPONSE

a. Confirmed

RESPONSE to PR/USPS-T3-13 (continued)

Variable Name	Description
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n dn	A code utilized to describe the area of ownership of the route.
_	·
n_conid	The contract ID for this leg of transportation, sometimes referred to as the Route Number
n_seg	The segment of the route trip combination, this is utilized when there are multiple stops on the same route trip
n_fin_no	The finance number associated with this leg of transportation
n_acc_no	The account number associated with this leg of transportation
n_trip	The trip ID for this leg of transportation, sometimes referred to as the Trip Number
n_frequency	The frequency code for this leg of transportation, or the number of times this trip runs over the course of a year
n_freq_rate	A numerical description of the number of times this trip runs over the course of a year.
n_freq_no	A code which aligns with the frequency of the trip
n_trp_miles	The overall miles associated with this route
n_seq_no	The sequence number of the trip, utilized for sorting purposes
n_trp_orig	The name of the origin facility associated with this leg of transportation
n_o_nass_cod	The origin NASS code of the facility associated with this leg of transportation
е	
n_ld_date	A load date indicator utilized to determine if the load date is the day prior to the unload date or not.
n_ld_time	The time associated with the loading of this leg of transportation
n_lv_date	A leave date indicator utilized to determine if the load date is the day prior to the arrive date or not.
n_lv_time	The leave time associated with this leg of transportation.
n_seq_no2	The sequence number of the trip, utilized for sorting purposes
n_trp_dest	The name of the destination facility associated with this leg of transportation
n_d_nass_cod e	The destination NASS code of the facility associated with this leg of transportation
n_ar_date	An arrive date indicator utilized to determine if the leave date is prior to the arrive date or not.
n_ar_time	The arrival time associated with this leg of transportation
n_unld_date	An unload date indicator utiilzed to determine if the load date is the day prior to the unload date or not.
n_unld_time	The unload time associated with this leg of transportation
n_vehicle	A vehicle ID for this leg of transportation
n_lv_minute	A conversion of the leave time to minutes
n_ar_minute	A conversion of the arrive time to minutes
flag	A flag utilized for sorting purposes

- b. All Dry Lanes data are specific to the operations of particular non-postal business entity. It reflects how that entity named the table and categorized those lanes for reasons unknown to the Postal Service. This data table was inadvertently left in the database and is not utilized in any manner for the purposes of this case.
- c. Not confirmed. The data are extracted directly from its data source.

RESPONSE to PR/USPS-T3-13 (continued)

- d. The query was used for separate analysis of the degree to which the lanes of the non-postal business entity referenced in the response to subpart (b) matched USPS lanes.
 For Post Office, often the 5-digit ZIP Code matches the NASS Code. This query was inadvertently left in the database and is not related to Network Rationalization.
- e. The results of the query are not related to and were not used in the Network Rationalization analysis. See the responses to subparts (b) and (d).

PR/USPS-T3-14

Please refer to page 9 of your testimony where it states: "A minimum threshold of 21,265 square feet, determined on the basis of regression analysis was set for each mail processing site".

- a. Please provide a library reference with the regression analysis and results in SAS or other statistical software.
- b. Please confirm that USPS-LR-N2012-1/36 does not contain data on building square feet used for regression analysis.
- c. Please provide all data used for the regression analysis. If this data exists in an existing library reference, please indicate the specific worksheet(s) where the data are present.

RESPONSE

- Additional supporting materials will be filed in USPS Library Reference
 N2012-1/43.
- Not confirmed; In Library Reference 14, "14_Mail Processing Window Scoring
 Tool.xls", there are two tabs with supporting information

"Overhead Regression" and "Bldg SqFt". Additional information is enclosed within the comments of cell E20 on the assumptions page. The comments are as follows:

Some overhead costs were found to have a strong relationship to square foot in the equation: Overhead = -Ax2 + Bx - C

where A, B, and C are constants and x is the square feet. In order to prevent a negative amount of overhead cost and also take into consideration there was a limit to how small of a building we would utilize, a minimum building size was set at 21,265

c. See USPS Library Reference N2012-1/43.

PR/USPS-T3-15

Please refer to page 9 of your testimony where it states: "Overhead costs include the following categories from the Fiscal Year 2010 Postal Service Financial Reporting (PSFR): administrative, supplies, supplies (inventory), rent, and depreciation."... "The PSFR data are provided in USPS Library Reference N2012-1/36".

- a. Please confirm that table 'ACCTG' in USPS-LR-N2012-1/36 provides data on overhead costs for the Fiscal Year 2010 (Field 'FY 2010 Amt').
- b. Please reconcile or provide a cross-walk for the sub-categories of overhead costs in Field 'Line Description' of Table 'Line' in USPS-LR-N2012-1/36, with the aggregated categories listed on page 9 of the testimony.

- a. Confirmed.
- b. See the crosswalk below.

Line #	Line Description		
18	ADMINISTRATION	Included	Overhead
31	SUPPLIES	Included	Overhead
33	SUPPLIES-ISSUED FROM INVENTORY	Included	Overhead
41	RENT	Included	Overhead
43	DEPRECIATION & AMORTIZATION	Included	Overhead

PR/USPS-T3-16

Please refer to page 14, footnote 17 of your testimony where it states: "The opportunity cost was calculated using regression analysis to determine the sale price of owned buildings" ... "Details are provided in library reference USPS-LR-N2012-1/15". Please provide a library reference with the regression analysis and results in SAS or other statistical software.

RESPONSE

USPS Library Reference N201201/43 will contain the following file: Minitab.MPJ. In summary, the independent factors for these recently sold buildings were tested for influence on the sale price within Minitab. Square footage was the only significant factor. Thus the building value was used and the "opportunity cost" of the building's value was spread over 10 years at the expected rate of inflation.